

ABSTRACT OF THE DISCLOSURE

A non-aqueous electrolyte secondary battery comprises a positive electrode including elemental sulfur, a negative electrode including silicon that stores lithium, and a non-aqueous electrolyte including a room temperature molten salt having a melting point of not higher than 60°C. The non-aqueous electrolyte may further include at least one type of solvent selected from cyclic ether, chain ether, and fluorinated carbonate. The non-aqueous electrolyte may include a reduction product of elemental sulfur. The positive electrode has a positive electrode active material made of a mixture of elemental sulfur, a conductive agent, and a binder. The electrode having a positive electrode active material is processed under reduced-pressure while immersed in the non-aqueous electrolyte. A pressure during the reduced-pressure process is preferably not higher than 28000 Pa (- 55 cmHg with respect to atmospheric pressure).